

ABSTRACT

A method of making combustion turbine transition duct bodies without longitudinal welds by hydroforming two duct bodies back to back with ~~bellewed~~ bellows thrusters secured to the ~~cuty~~ duct body open ends. This enables the manufactureling of duct bodies with detailed features and high pressure without using compression cylinders. Multi-layer transition duct bodies can also be assembled with layers of different materials, for example, having a heat-resistant layer inside and high strength layer outside. They can be assembled using cold shrinking and heat expanding. In addition, anti-fretting and anti-vibration coatings can be applied between the layers for improved performance.